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Independent Verification and Validation (IV&V)

According to IEEE 1059, Guide for Software Verification and Validation Plans:

"Software Verification and Validation (V&V) is a disciplined approach to assessing software products throughout the product life cycle. A V&V effort strives to ensure that quality is built into the software and that the software satisfies user requirements. V&V provides software management with insights into the state of the software project and products, allowing for timely change in the products or in the development and support processes.

Software verification and validation employs review, analysis, and testing techniques to determine whether a software system and its intermediate products comply with requirements. These requirements include both functional capabilities and quality attributes."

The Project Office Quality Assurance staff are also responsible for ensuring the quality of the project work products through verification and validation. The project manager develops a [strategy for Quality Assurance and IV&V](#) to balance their efforts. In addition, the projects often have an Independent Project Oversight Consultant (IPOC) assigned to their project to focus on project management and risk processes. The IPOC works with the IV&V and QA to monitor processes and performance of the project.

A pre-qualified IV&V vendor can be hired through MSA or CMAS as explained in the [consultant staffing page](#).

An IV&V consultant should prepare an [IV&V plan](#) according to IEEE 1059 and IEEE 1012 (see link below). The IV&V consultant will also prepare work product reviews and periodic status reports according to the plan.

- IEEE [1012-1998](#) (link to pdf), Standard for Software Verification and Validation
- IEEE [1059-1993](#) (link to pdf), Guide for Software Verification & Validation Plans (ANSI)